

**Template for information regarding the prime Committee on Earth Observation Satellites (CEOS) Working Group on Calibration & Validation (WGCV) Cal/Val site:**

- Core Site
  - Site Name: LSpec at Frenchman Flat
  - Location: 100km Northwest of Las Vegas, Nevada, USA
  - Altitude: 940 m above sea level
  - Centre Latitude/Longitude: 36.80928 / -115.93479
  - Size/shape of usable area:
    - Fairly clear area: 1000 m square clocked corners N-S & E-W
    - Homogenous area: 300 m square clocked sides N-S & E-W
    - Monitored area: 50m square clocked sides N-S & E-W
- Site Description:
  - Hard clay desert playa surrounded by light creosote and sage scrub
    - Natural playa extent is roughly 3 x 4 Km but majority of surface is scarred by weapons testing debris such as roads, buildings, bunkers and bridges
- Site photos are available at <http://lspec.jpl.nasa.gov>
- Current Status of the Site:
  - Instrumented, Automated
  - Visited and maintained quarterly
  - Source of funding for maintenance: US Government
  - Restricted access
- Surface Measurements:
  - Meteorological:
    - Wind Speed, Direction
    - Ambient Temperature
    - Relative Humidity
    - Barometric Pressure
  - Surface:
    - Spectral Reflectance
    - Temperature
  - Sky:
    - AERONET sunphotometer node (Frenchman Flat)
  - Historical record of site from mid-November, 2006
  - Average number of days with clear skies >300
  - Seasonal variation: Low
- Surface Characteristics – Hyperspectral surface reflectance is measured about twice a year via ASD FR Field spectrometer. For further information, see: <http://lspec.jpl.nasa.gov>
- Route of traceability:
  - Met: manufacturer's initial calibration (RM Young & Campbell)
  - Surface: See attached manuscript
  - Sky: Via AERONET calibration strategy
  - Estimated uncertainty of reflectance/radiance at surface:
- Public reference / evidence / uncertainty breakdown

- • Estimated uncertainty of reflectance/radiance at TOA
- Public reference / evidence / uncertainty breakdown
  - Sampling strategy
  - Surface reflectance – variability across site (uniformity) (%)
  - Average site reflectance plot (calibration site)
- • At nadir
  - • BRDF (or specific angles)
  - Principal site reflectance plots (validation site)
- • At nadir
  - • BRDF (or specific angles)
  - Site stability (measurement variability)
- • Visit-to-visit
  - • Long term
    - Surface slope (angle and direction)
    - Atmospheric stability (aerosol loading and water vapor content)
    - Number and availability of well surveyed points
- • Site Usage
  - Historical record of comparisons (ground, aircraft and satellite)
- • Dates / sensors / location of results
  - Regularity of satellite data (if known)
- • Satellite and sensor ID
- **Auxiliary data**
  - • Landsat WRS2 Path/Row
    - NW Corner Latitude/Longitude (degrees)
    - NE Corner Latitude/Longitude (degrees)
    - SW Corner Latitude/Longitude (degrees)
    - SE Corner Latitude/Longitude (degrees)
  - • Mask (if relevant)